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THE Catalogue is arranged alphabetically, the title and a full description of each book being given under the *Author's name*, a brief description being also given under the *subject of the work*. The papers read before Actuarial or Insurance Societies or Institutes are detailed under the name of the Society or Institute, but in the case of collective publications, such as the British Almanac and Statistical Journal, a list is given only of such of the articles or treatises therein as are considered most useful to the Actuarial student.

The following are the principal Subject-headings :—

Accident Insurance.
Acts of Parliament.
Actuarial Reports.
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Arithmetic and Theory of Numbers.
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British Almanac.
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Life Assurance.
Life Contingencies, including Actuarial Tables.
Marine Insurance.
Mathematics, including Algebra, Differential and Integral Calculus, Finite Differences, Geometry, Logarithms (Theory and Tables), Probabilities, and Trigonometry.
Mortality (construction of Tables and Experience).
Periodicals.
Political Economy, including Industry and Commerce, Taxation and Taxes, and Theory of Population.
Population.
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For	B.I.	read	Birmingham Insurance Institute.
	B.M.A.	,,	Proceedings of the British Medical Association.
	F.S.	,,	Friendly Society.
	I.I.	,,	Insurance Institute of Ireland.
	J.I.A.	,,	Journal of the Institute of Actuaries (London).
	J.S.S.	,,	Journal of the Statistical Society (London).
	M.A.	,,	Insurance Association of Manchester.
	M.I.	,,	Insurance Institute of Manchester.
	M.O.	,,	Life Assurance Medical Officers' Association.
	N.S.W.I.	,,	New South Wales Insurance Institute.
	P.	,,	Pamphlets.
	T.A.	,,	Transactions of the Actuarial Society (America).
	T.E.	,,	Transactions of the Actuarial Society (Edinburgh).
	T.G.	,,	Transactions of the Insurance and Actuarial Society (Glasgow).
	V.I.	,,	Victoria Insurance Institute.
	W.F.	,,	Widows' Fund.
	Y.I.	,,	Yorkshire Insurance Institute.

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See also Blue Books—Employers' Liability—J.S.S.—Registrar-General's Reports—Switzerland—Teece—United States.

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Value of New Blood in Life Insurance. B. J. Miller.
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The Proper Treatment of a Life Insurance Company in which the Reserve has become impaired. S. Homans.
Adverse Selection by Withdrawal. H. W. St. John.
Just apportionment of the expenses of Mutual Life Insurance Companies. W. E. Starr.
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Policy Values—one of their Relations. J. H. Sprague.
Analysis and Disposition of Gains over assumed Liabilities. A. S. Wing.
Formulae for ascertaining Contributions to Surplus. E. McClintock.
Concerning Extra Premiums. D. P. Fackler.
Some thoughts regarding margins for Expenses and Contingencies and Surrender Charges. S. Homans.
On the Provision for and Assessment of Life Insurance Expenses, etc. W. C. Wright.
Observations on Impaired Lives. J. M. Craig.

1891.

Insurance Values as Bases for Surrender Charges. S. Homans.
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Some thoughts on the principles involved in Graduation. W. S. Nichols.

Actuarial Society of America—*Continued.*

Transactions—Continued.

Tate's Arithmometer. M. H. Peiler.
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Method of measuring the maximum amount which an Insurance Company may properly assume on a single life. C. C. Hall.
Weight and Longevity. T. B. Macaulay.
Double Endowments. I. C. Pierson.
Comparison of American and Australian Mortality. R. Teece.
Distribution of Expenses in Life Insurance. W. D. Whiting.
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Ratios of Mortality for Number and Amount. A. S. Wing.
Percentage Formula for obtaining Return Premium Rates. S. E. Stilwell.
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Farr's Healthy English Male Life Table—4 per cent. D. J. McG. McKenzie.
Error in Age. J. G. Richter.
Apportionment of Surplus to the holders of Completed Contracts. O. B. Ireland.
Effect of Selection, Essay on. E. McClintock.
Apportionment of Expenses and its Relation to the Distribution of Surplus. W. E. Starr.

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Transactions—Continued.

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Present Financial Crisis and Legislation concerning Impairment. D. P. Fackler.

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Life Table based upon Insurance in the American Tropics. C. N. Jones.

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Formulas for the direct application of Interpolated Values of well-known policies to the valuation of Limited Payment, Changed and Lien Policies. A. K. Blackadar.

Proper Charges for Annuities and Assurances to provide for a decreasing rate of interest. D. P. Fackler.

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Monetary Analysis of the Vitality Gain of the New England Mutual Life Insurance Company for the years 1889-1893. W. C. Wright.

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Transactions—Continued.

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An Actuarial Proposition and a Suggestion. W. C. Wright.
*Decreasing Rates of Interest in connection with Annuities and Insurances. D. P. Fackler.
*Necessity of a Universal Notation.
A. Bégault, translated by G. F. Salter.
* Do. I. C. Pierson.
*In valuing Policies, should any allowance be made on account of the expense of obtaining New Business?
Dr. T. B. Sprague, with remarks by S. Homans.
*On the Intervention of the Legislator to permit or assume the supervision of the operations of Life Insurance Companies.
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* Do. T. B. Macaulay.

**Papers by Members read at the International Congress of Actuaries, Brussels, September* 1895.

1896.

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Note on Cost of Insurance. E. L. Stabler.
Interest Requirements and Mortality Costs. W. D. Whiting.
On Reckoning in Games of Chance.
Christian Huygens, translated by E. W. Scott.
Review of the Published Mortality Experience of the four French Companies. E. L. Stabler.
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Tendency to National Supervision. E. P. Marshall.
Note on a particular case of Loans repayable by instalments.
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Actuarial Society of America—*Continued.*

Transactions—Continued.

Note on Premium Loading. W. C. Wright.
Problem of the Value of Money. M. Léon Walras, translated by R. W. Weeks.
Cost of Insurance. M. W. Torrey.
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General Principles. E. McClintock.
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An equitable method of determining Paid-up or Cash Surrender Values. D. P. Fackler.
Select Life Tables as the basis of Premium Rates (continued). T. Bradshaw.
Modification of McClintock's formula for an approximation of Accumulated Contribution to Surplus. G. L. Plumley.
Valuation of Reversionary Annuities by Commutation Columns. M. H. Peiler.

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1. On the 5th and 6th Schedules of the Life Assurance Companies' Act 1870, by David Deuchar. 1879

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2. On Joint Life Annuities, by J. J. M'Lauchlan. 1879
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11. On the official publications of the Mortality of Assured Lives, by James Meikle. 1885
12. Notes on the Theory of Logarithms, by W. R. Macdonald. 1885
13. On the several mortality tables employed in the valuation of Annuity Contracts, by G. H. Ryan. 1885

Appendix—List of Papers read before the Society from its institution.

Vol. II.

1. The duties of an Actuary in his professional relationships, by J. M. M'Candlish. 1886
2. A comparison of the Rates of Mortality among Insured Lives and Government Annuitants, having regard to the effect of selection, by James Chatham. 1886
3. Remarks on the position and prospects of the Actuarial profession, and of the Business of Life Assurance, by S. C. Thomson. 1887
4. On Life Assurance Book-keeping, by J. J. M'Lauchlan. 1887
5. The progress of Life Assurance Business in the United Kingdom during the last fifty years, by David Deuchar. 1888
6. On the rate of mortality among Liquor-sellers, by Thomas Wallace. 1888
7. Some Remarks on the Report by the Commissioners appointed to investigate into the recent changes in the relative values of the Precious Metals, by A. Gillies-Smith. 1888
8. Statistics as to the Mortality Experience among Assured Lives engaged in the Liquor Trade, by Gordon Douglas. 1888
9. The Mortality among Assured Lives viewed in relation to the sums at risk, by G. C. Stenhouse. 1889
10. Outside Business Training, by J. Turnbull Smith. 1889

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Transactions (3 copies)—*Continued.*

11. The Tenure of Land in the United Kingdom and its principal Colonies, by A. H. Turnbull. 1890
12. On some Formulas for use in Life Office Valuations, by J. J. M'Lauchlan. 1890
13. On some Fundamental Principles in the Theory of Probability, by Professor Chrystal. 1891

Vol. III.

1. On the Interests of Heirs of Entail and the Calculation of the Pecuniary Values, by Henry R. Cockburn and Robert Murrie.
2. Administration—Notes by an Old Hand, by John M. M'Candlish. 1892
3. The Recent Australian Bank Failures, by George M. Low. 1893
4. On Probability and Chance, and their connection with the Business of Insurance, by T. B. Sprague. 1893
5. Misrepresentation and Concealment as affecting Policies of Insurance, by William Harvey. 1894
6. The Present Position of the Silver Question, by Professor J. Shield Nicholson. 1894
7. Life Assurance in Canada, by Frank Sanderson. 1894
8. Notes on Widows' Funds, by David Deuchar. 1894
9. Life Office Investments—Retrospect and Outlook, by David Paulin. 1895
10. Lectures on Insurance Law, by William Harvey. 1895
    I. Conditions in Life Policies.
    II. Policies of Insurance as Securities and in Trust.
    III. Accident Insurance.
    IV. Conditions in Fire Policies.
11. A Commentary upon the Married Women's Policies of Assurance (Scotland) Act, 1880, by A. H. B. Constable. 1896
12. I. Note on the Rate of Mortality in Sierra Leone.
    II. An Investigation as to how far Life Insurance is of a Provident Nature as benefiting the Assured and his Family; and how far it is of a merely Financial Character, as benefiting his Creditors and Assignees, by A. E. Sprague. 1896
13. Note on Select Life Tables, by J. R. Hart. 1896
14. The Evolution of Premium Rates, a chapter in the History of Life Insurance, by James Sorley. 1896

Vol. IV.

1. Old Age Pensions and Pauperism, by David Paulin. 1896
2. On an Investigation into the Mortality of the Married Females of the Peerage, by J. R. Hart. 1897
3. A Description of certain of the principal Stock Exchange Securities, by J. Nicoll. 1897

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Transactions (3 copies)—*Continued.*

4. Some Medical aspects of Life Assurance, by Dr. Leslie Ogilvie. 1897
5. On Extra Risk, with some particulars of the recent investigation of the mortality of persons engaged in the sale of intoxicating liquors, by G. M. Low. 1897
6. Forms of Life Office Books, by W. Smith-Nicol. 1897
7. Some Suggestions in regard to Life Office Accounting, including, *inter alia*, an arrangement of the American card system, suitable for the requirements of British Offices, by A. D. L. Turnbull. 1898
8. The practical calculation of Office Premiums, by Henry Moir. 1898
9. Past and Future, with some thoughts on Heredity, by S. C. Thomson. 1898
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Papers read during Session 1886.
1. Inaugural Address by the President, A. H. Young.
2. Life Assurance in Australia from a medical aspect, by Dr. F. M. Harricks.
3. Some improvements in Life Assurance practice, by T. S. Robertson.
4. Insurance prospects in the Colonies, by M. A. Ridge.
5. General Average, by C. M. Holmes.
6. Personal reminiscences of Insurance Business, by W. Macredie.

Papers read during Session 1887.
1. Inaugural Address, by C. Salter.
2. Plea for the Volunteer Fire Brigade, by G. R. Cherry.
3. Life competition; some of its results, by S. G. Martin.
5. Collision Clause, by C. Rennie.
6. Advantages of combination in matters other than rates, by C. E. Jarrett.
7. Insurances on Mortgaged Properties, by G. C. Arnold.
8. Assessment of Life Risks, by J. B. Gillison.
9. Barratry, by A. J. Masters.

Victoria Insurance Institute—*Continued.*

Papers read during Session 1888.

1. Inaugural Address, by C. Rennie.
2. Negligence clause in Bills of Lading, by E. E. Dear.
3. Gleanings from the vital statistics of Victoria, by T. S. Robertson.
4. Some aids to calculation, by J. B. Gillison.
5. Our ports and their dangers, by W. A. Paterson.
6. Esprit de Corps among offices and their representatives, by W. H. Chandler.
7. Fire Brigade organisation, by W. Crellin.

Papers read during Session 1889.

1. Inaugural Address, by J. Sinclair.
2. Spontaneous Combustion, by W. Farquhar.
3. Mortality as affecting Life Assurance in Australia, by T. W. Bremner.
4. Electric lighting in relation to Fire risks, by G. Gibb.
5. Craft risks (marine), by B. Goldsmith.
6. Detection of diabetes and chronic Bright's disease among proponents for Life Assurance, by Dr. W. R. Fox.

Papers read during Session 1890.

1. Inaugural Address, by J. B. Gillison.
2. Average clause in Fire Policies, by C. R. Colquhoun.
3. Reform of general average, by W. H. Jarrett.
4. Is Cancer Hereditary? by Dr. J. Talbot Brett.
5. Constructive total loss (marine), by A. C. Trapp.
6. Short treatise on Fire Insurance Surveying, by A. J. E. Murray.

Papers read during Session 1891.

1. Inaugural Address, by C. E. Jarrett.
2. Automatic Sprinklers, by S. G. Russell.
3. Some points in connection with the medical examination of proponents for Life Assurance, by Dr. J. Jamieson.
4. Notes on electrical applications, by K. L. Murray.
5. Dangers of the Deep, by E. S. Watson.
6. Fire Reinsurances, by A. Rattray.

Papers read during Session 1892.

1. Inaugural Address, by E. E. Dear.
2. The amount that should be allowed by a Life Office as Surrender Value of a Policy, by C. A. Schultz.
3. The Eleventh Commandment, by F. F. Leslie.
4. Lloyd's, by R. H. Robinson.
5. Run round the coast of New Zealand, by J. Mallard.
6. Australian Reminiscences, by A. J. Wright.

Victoria Insurance Institute—*Continued.*

Papers read during Session 1893.

1. Inaugural Address, by W. H. Jarrett.
2. Short term risks in Fire Insurance, by J. Sinclair.
3. Physical view of the Ocean and a short sketch of its history, by W. R. Ray.
4. Effects of financial depression on Fire Insurance, by C. R. Colquhoun.
5. Comparison of the Rates of Mortality in Victoria, 1881-91, with a special reference to Cancer, Phthisis, and violence, by R. D. Miller.
6. Co-operation, by A. J. Wright.

Papers read during Session 1894.

1. Inaugural Address, by M. A. Ridge.
2. Money and Bimetallism, by G. A. Russell.
3. Shipping Law, by Dr. Wollaston.
4. Conditions of Health after Life Insurance, by Dr. J. E. Neild.
5. Doom of General Average, by W. H. Jarrett.
6. Law of Heredity (Prize Essay), by W. Farquhar.

Papers read during Session 1895.

1. Inaugural Address, by E. E. Dear.
2. The Health Act; some of the effects of its proper administration to Life and Property, by Dr. W. Macansh.
3. Classification of Fire Risks, by C. R. Colquhoun.
4. Is Insurance Gambling? by A. C. Trapp.
5. Free Trade from an Insurance point of view, by J. T. Woods.

Papers read during Session 1896.

1. Inaugural Address, by G. Gibb.
2. Some Fire Insurance Gleanings, by R. S. Robertson.
3. Law-making, by E. S. Watson.
4. Development of the Export Trade of Victoria, by B. Goldsmith.
5. Old Age Pensions, by J. Pullar.
6. Objects of the Insurance Institute of Victoria, by F. F. Leslie.

Papers read during Session 1897.

1. Investments of Australasian Life Offices, by J. B. Gillison. (Inaugural Address.)
2. Gas and Acetylene as Illuminants, by Prof. D. O. Masson.
3. Some considerations on the Maritime Interest, Freight, etc., by W. R. Ray.
4. Heredity, by W. Farquhar.
5. Some Causes of Fire, by F. M. Syme.
6. Insurance Notes from an Eastern City, by A. C. Trapp.

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Theory of Probabilities.

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Interest and Annuities-certain, with Construction of Monetary Tables.

Probabilities of Life and of Survivorship.

Theory of Life Contingencies, including Annuities and Assurances, with Construction of relative Tables.

History and Characteristics of Mortality Tables.

Application of the Calculus of Finite Differences to Life Contingencies.

Elements of the Differential and Integral Calculus.

THIRD EXAMINATION.

Mortality, Marriage, and Sickness Investigations, including Construction of Tables from actual or from hypothetical data.

Graduation of Tables.

Formulas for Summation and Interpolation.

Application of the Differential and Integral Calculus to Life Contingencies.

Life Assurance Finance and Practice, namely:—

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- Valuation of Assets and Liabilities.
- Distribution of Surplus.
- Surrender and Conversion of Policies and Bonuses.
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- Investments.
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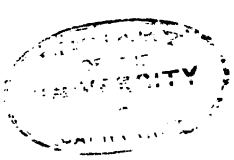

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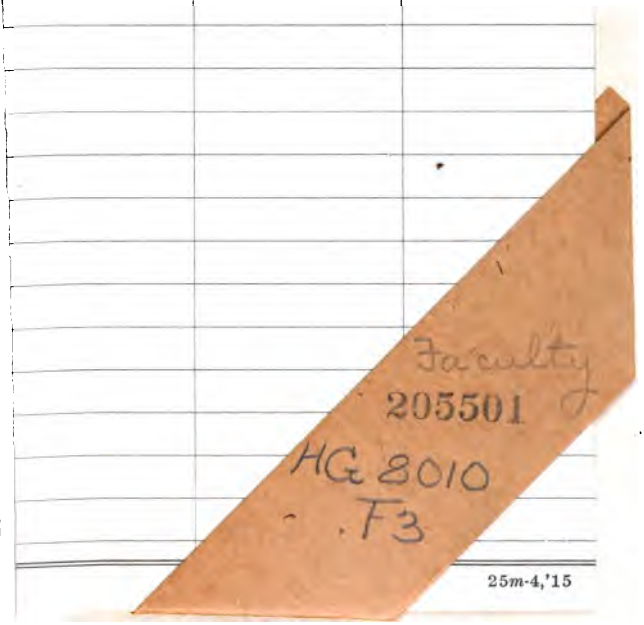

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